ABSTRACT

Disclosed are polypeptides named HP1122, Cj1464 and PA3351 which are the anti-σ^{28} factor of *Helicobacter pylori, Campylobacter jejuni* and *Pseudomonas aeruginosa*, respectively and fragments and variants thereof. Also disclosed is a polypeptide named SID1122 which is the domain of *Helicobacter pylori*'s HP1122 polypeptide involved in a specific interaction with *Helicobacter pylori* σ^{28} (HP1032) and which has an anti-σ^{28} factor activity. Further disclosed are a SID1122 polypeptide that interacts with HP1032, identification of the HP1032 interacting domain (SID1032) that is specifically involved in the interaction with HP1122, complexes of two polypeptides such as HP1122 – HP1032, or SID1122 - SID1032, fragments and variants of the SID1122 and SID1032 polypeptides, antibodies to the SID1122 and SID1032 polypeptides, methods for screening drugs or agents which modulate the interaction of *Helicobacter pylori*'s polypeptides encoded by HP1122 and HP1032, and pharmaceutical compositions for treating or preventing Gram negative flagellated bacteria infection in a human or mammal, more specifically *Helicobacter* sp. or *Campylobacter jejuni* or *Pseudomonas aeruginosa* infection, in particular *Helicobacter pylori* infection in a human or a mammal.

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